

**REMARKS**

Applicant submits this Amendment in response to a non-final Office Action mailed on September 21, 2004. Applicant makes this Amendment without prejudice or disclaimer. Claims 1-32 are pending in the Application. In making this Amendment, Applicant has added no new matter. Support for the amendments above can be found in the specification and claims as filed. Reconsideration of the pending claims is respectfully requested in view of the foregoing amendments and the following remarks.

The Office Action objects to claims 6, 8, 21, 23, and 30 as lacking proper antecedent basis. The Office Action rejects claims 1-5, 12-14, 16-21, 27-29, and 32 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,538,536 to Sick (hereinafter "Sick"). The Office Action rejects claims 6-11, 21-26, 30, and 31 under 35 U.S.C. § 103(a) as being unpatentable over Sick in view of U.S. Patent No. 5,006,701 to Kothe et al. (hereinafter "Kothe").

**A. Claims 6, 8, 21, 23, and 30**

The Office Action objected to claims 6, 8, 21, 23, and 30 for informalities. In particular, the Office Action asserts that in claims 6, 21, and 30, the claim term "the sensor" lacks antecedent basis. The Office Action also asserts that in claims 8 and 23, the claim term "the controller" lacks antecedent basis.

Applicant has amended claim 8 and asserts that each claim term includes proper antecedent basis. With respect to claims 6, 21, 23, and 30, Applicant traverses

these objections and asserts that each claim term includes proper antecedent basis.

Claims 6, 21, and 30 depend from independent claims 1, 17, 27, respectively. Each of claims 1, 17, and 27 recites “a sensor.” (See line 14 of claim 1; line 9 of claim 17; and line 10 of claim 27). Thus, claims 6, 21, and 30 include proper antecedent basis.

Claim 23 is asserted by the Office Action as reciting “the controller” in line 1. Applicant respectfully disagrees. The term “controller” is entirely absent from claim 23.

Accordingly, the objections to claims 6, 8, 21, 23, and 30 should be withdrawn and the claims allowed.

**B. Claims 1-5, 12-14, 16-21, 27-29, and 32**

Claims 1-5, 12-14, 16-21, 27-29, and 32 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Sick. The rejection under 35 U.S.C. § 102(b) is improper because Sick does not disclose each and every element of the claims at issue. A claim is anticipated by a prior art reference only if each and every element as set forth in the claim is found. See MPEP § 2131 (citing *Verdegel Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051 (Fed. Cir. 1987)).

Independent claims 1, 17, and 27 each claim a system, a method, and an apparatus, respectively, which includes “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens.” Claims 2-5, 12-14, and 16 depend ultimately from independent

claim 1. Claims 18-21 depend ultimately from independent claim 17. Claims 28, 29, and 32 depend ultimately from independent claim 27.

Sick does not disclose a system, method, or apparatus that includes “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens,” as claimed. Rather, Sick describes a complex arrangement of deflecting mirrors, reflecting strips, lenses, and mirrors to direct a laser beam. Sick does not describe, or even contemplate, the use of fiber optic cables for detecting thread breakage. Thus, Sick does not disclose “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens.”

As Sick does not disclose each and every element of each of independent claims 1, 17, and 27, Applicant respectfully submits that independent claims 1, 17, and 27 are each patentable over Sick. Claims 2-5, 12-14, and 16 depend ultimately from independent claim 1, claims 18-21 depend ultimately from independent claim 17, and claims 28, 29, and 32 depend ultimately from independent claim 27, and are, therefore, also allowable for at least the same reasons as independent claims 1, 17, and 27. Accordingly, the rejections to claims 1-5, 12-14, 16-21, 27-29, and 32 should be withdrawn and the claims allowed.

**C. Claims 6-11, 21-26, 30, and 31**

Claims 6-11, 21-26, 30, and 31 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Sick in view of Kothe. Claims 6-11 depend ultimately from independent claim 1. Claims 21-26 depend ultimately from independent claim 17. Claims 30 and 31 depend ultimately from independent claim 27.

The rejection under 35 U.S.C. § 103(a) is improper because neither Sick nor Kothe teaches or suggests, singularly or in combination, all the claim elements of each of independent claims 1, 17, and 27. One of the criteria for a *prima facie* case of obviousness is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.” *See* MPEP § 2143. The cited references do not teach or suggest all the claim elements of each of independent claims 1, 17, and 27.

Dependent claims include all of the elements of the claim from which they depend. Thus, each of dependent claims 6-11, 21-26, 30, and 31 includes, “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens.” As discussed above, Sick does not disclose “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens,” as claimed.

The Office Action cites Kothe for describing “a sensor system for regulating machines comprising controllers 22, 23 in communication with a light source 16.” *See* Office Action at 4. Thus, Kothe does not disclose “a first fiber optic cable comprising proximate and distal ends, the proximate end of the first fiber optic cable in communication with the light source and the distal end of the first fiber optic cable in communication with the emitter lens.” Therefore, neither Sick nor Kothe teaches or suggests, singularly or in combination, all the claim elements of each of independent claims 1, 17, and 27.

As neither Sick nor Kothe teaches or suggests, singularly or in combination, all the claim elements of each of independent claims 1, 17, and 27, Applicant respectfully submits that independent claims 1, 17, and 27 are each patentable over Sick in view of Kothe. Claims 6-11 depend ultimately from independent claim 1, claims 21-26 depend ultimately from independent claim 17, and claims 30 and 31 depend ultimately from independent claim 27 and are, therefore, also allowable for at least the same reasons as independent claims 1, 17, and 27. Accordingly, the rejections to claims 6-11, 21-26, 30, and 31 should be withdrawn and the claims allowed.


**CONCLUSION**

Applicant respectfully submits that the pending claims are allowable.

Applicant respectfully solicits the issuance of a timely Notice of Allowance for all pending claims. The Examiner is invited to contact the undersigned by telephone to discuss any matter related to the Application.

Respectfully submitted,

Dated: October 19, 2004

  
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